

IN THE CLAIMS:

1. (Original) A two-terminal organic electronic device formed on a substrate, the device comprising:

a first electrode;

a second electrode spaced from the first electrode; and

a conductive organic thin film electrically connecting the first electrode and the second electrode;

wherein the conductive organic thin film comprises an organic molecular group comprising organic molecules each having a light-responsive group and has a conductive network in which the organic molecules making up the organic molecular group are bonded to one another by conjugated bonds.

2. (Original) A two-terminal organic electronic device according to claim 1, wherein the conductive organic thin film is a monomolecular film or a monomolecular built-up film, the monomolecular film and the monomolecular built-up film being fixed to the substrate.

3. (Original) A two-terminal organic electronic device according to claim 1, wherein the conductivity of the conductive network changes according to the amount of light with which the conductive organic thin film is irradiated.

4. (Original) A two-terminal organic electronic device according to claim 3, wherein the conductivity of the conductive network is shifted to a first conductivity or a second conductivity by irradiation of the conductive organic thin film with a first light or a second light, respectively, and is maintained at the first conductivity or the second conductivity, respectively, after irradiation is terminated, the first light and the second light having different wavelengths.

5. (Original) A two-terminal organic electronic device according to claim 1, wherein the light-responsive group is a photoisomerizable group.

6. (Original) A two-terminal organic electronic device according to claim 5, wherein the photoisomerizable group is an azo group.

7. (Original) A two-terminal organic electronic device according to claim 1, wherein the conductive network comprises at least one conjugated system selected from the group consisting of a polyacetylene-based, a polydiacetylene-based, a polypyrrole-based, a polythiophene-based, and a polyacene-based conjugated system.

8. (Original) A three-terminal organic electronic device formed on a substrate, the device comprising:

a first electrode;

a second electrode spaced from the first electrode;

a conductive organic thin film electrically connecting the first electrode and the second electrode; and

a third electrode sandwiched between the substrate and the conductive organic thin film and insulated therefrom;

wherein the third electrode controls an electric field across the conductive organic thin film by application of a voltage between itself and the first electrode or itself and the second electrode; and

the conductive organic thin film comprises an organic molecular group comprising organic molecules each having a polar group

and has a conductive network in which the organic molecules making up the organic molecular group are bonded to one another by conjugated bonds.

9. (Original) A three-terminal organic electronic device according to claim 8, wherein the conductive organic thin film is a monomolecular film or a monomolecular built-up film, the monomolecular film and the monomolecular built-up film being fixed to the substrate.

10. (Original) A three-terminal organic electronic device according to claim 8, wherein change in the conductivity of the conductive network is effected by the electric field applied across the conductive organic thin film.

11. (Original) A three-terminal organic electronic device according to claim 8, wherein the polar group is a polarizable group that is polarized when an electric field is applied.

12. (Original) A three-terminal organic electronic device according to claim 11, wherein the polarizable group is a carbonyl group or an oxycarbonyl group.

13. (Original) A three-terminal organic electronic device according to claim 8, wherein the conductive network comprises at least one conjugated system selected from the group consisting of a polyacetylene-based, a polydiacetylene-based, a polythiophene-based, a polypyrrole-based, and a polyacene-based conjugated system.

14. to 36. (Canceled)

37. (Original) A liquid crystal display device comprising an array substrate having a plurality of switching devices aligned and disposed in a matrix on a first substrate and a first orientation film formed thereon, a color filter substrate having a plurality of color elements aligned and disposed in a matrix on a second substrate and a second orientation film formed thereon, and a liquid crystal sealed between the array substrate and the color filter substrate, the array substrate and the color filter substrate arranged opposing each other with the first orientation film and the second orientation film on the inside, the liquid crystal display device wherein:

each of the switching devices is a three-terminal organic electronic device comprising a first electrode, a second electrode spaced from the first electrode, a conductive organic thin film electrically connecting the first electrode and the second electrode, and a third electrode sandwiched between the first substrate and the conductive organic thin film and insulated therefrom, wherein the third electrode controls an electric field across the conductive organic thin film by application of a voltage between itself and the first electrode or itself and the second electrode, the conductive organic thin film comprising an organic molecular group comprising organic molecules each having a polar group and the conductive organic thin film having a conductive network in which the organic molecules making up the organic molecular group are bonded to one another by conjugated bonds.

38. (Original) An electroluminescent display device comprising an array substrate having a plurality of switching devices aligned and disposed in a matrix on a substrate, a

common electrode opposed to the array substrate, and a light-emitting layer comprising a fluorescent material which emits light when an electric field is applied, the light-emitting layer formed between the array substrate and the common electrode, the electroluminescent display device wherein:

each of the switching devices is a three-terminal organic electronic device comprising a first electrode, a second electrode spaced from the first electrode, a conductive organic thin film electrically connecting the first electrode and the second electrode, and a third electrode sandwiched between the substrate and the conductive organic thin film and insulated therefrom, wherein the third electrode controls an electric field across the conductive organic thin film by application of a voltage between itself and the first electrode or itself and the second electrode, the conductive organic thin film comprising an organic molecular group comprising organic molecules each having a polar group and the conductive organic thin film having a conductive network in which the organic molecules making up the organic

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molecular group are bonded to one another by conjugated bonds.

39. (Original) An electroluminescent display device according to claim 38, wherein the fluorescent material comprises three types of fluorescent materials, those which emit red, blue and green light, respectively, and are aligned and disposed to achieve color display.

40. to 101. (Canceled)